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150 Mineral Spring Drive Dover, New Jersey 07801 201 361-3600 FAX 361-3800

January 2, 1990

New Jersey Dept. of Environmental Protection Bureau of Federal Case Management Division of Hazardous Waste Management 401 East State Street Trenton, New Jersey 08625

ATTN: Edgar Kaup

SUBJ: L.E. Carpenter

Wharton, New Jersey

Dear Ed:

During review of laboratory testing data for the above-referenced job, questions arose concerning laboratory method blank results. These questions were asked of the laboratory and their response came after we submitted the "Report of Remedial Investigation Findings" in November, 1989. The purpose of this letter is to inform you of the problems and submit the minor changes that have occurred in our report due to the laboratory's response.

Two problems were noted while reviewing the method blank analytical results. The first problem was that the base neutral analysis results of hand auger samples HA-16, 17 and 19 indicated diethyl phthalate. The laboratory also flagged this as a compound present in the laboratory method blank. Review of the results for the laboratory method blank analyzed with these samples indicated diethyl phthalate was not detected. This conflict was reported to the laboratory. The laboratory responded by re-submitting the method blank results, indicating that diethyl phthalate was detected.

The second problem was that the laboratory reported that some of the base neutral compounds detected in TP-73 were also present in the method blank. Review of the results of the method blank analyzed with the TP-73 sample indicated different compounds detected than what were originally flagged. This conflict was also reported to the laboratory. The laboratory responded by resubmitting the method blank assignment sheet (QC Lot Assignment) and indicated that the sample had been assigned to the wrong method blank and that the compounds originally flagged and reported for the sample were correct.

Attached to this letter are revised data summary tables reflecting the changes based on the new laboratory information. Revisions made to the original report include new base neutral method blank summaries for HA-16, HA-17, HA-19 and TP-73 and a revised summary of hand auger base neutral results for HA-16, HA-17 and HA-19 (Table 13). All the revised pages are marked with a note "revised December 20, 1989." Also attached to this letter are copies of the laboratory's report revisions.

If you have any questions regarding these changes, please call.

Sincerely,

GEOENGINEERING, INC.

Nancy van Dyke Hydrogeologist

William W. Dunnell IV

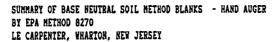
Project Manager

WWD/NVD/ebt
Attachments

cc: R. Hahn

C. Anderson

M. Rodburg



GeoEngineering, Inc. November, 1989 Page 2 of 2 Revised 12/20/89

SAMPLE ID:	I HA-16	I HA-17	I HA-18	HA-19 I	ı
				5/15/89 • 1	i
THE SHIP OF THE PROPERTY OF TH					,
PARAMETER	!	 	i		ì
(ug/kg)	I	i	I	· 	i
(agrid)	i	•	!		i
bis(2-Chloroethyl)ether	ND	•	I ND	. פא	i
1,3-Dichlorobenzene	i NO		1 11		i
1,4-Dichlorobenzene	ו אם				l
-	I ND				ı
bis(2-Chloroisopropyl)ether	I ND	I ND	I KD	I KD	i
• ••	I ND	I ND	I ND	I ND	ì
• ••	I ND	I RD	I ND	I ND	ı
Ritrobenzene	I ND	ם א	I ND	i ND	ı
Isophorone	i ND	1 ND	I KD	I ND	ı
	I ND	I ND	I RD	I ND	ı
•	I ND	I ND	i ND	I ND	1
Naphthalene	I ND	I ND			i
Hexachlorobutadiene	I ND	I ND	I ND		i
	I ND	I ND	I ND		i
2-Chloronapthalene	I ND	I ND	I KD	מא ו	ì
•	מא ו	I ND	I ND	I ND	i
Dimethyl phthalate	I ND	ו אם	I ND	i KD	i
Acenaphthylene	I ND	I ND	I ND	i ND	i
Acenaphthene	I ND	I ND	i ND	I ND	i
2,4-Dinitrotoluene					1
2,6-Dinitrotoluene	I ND	1 ND	I ND	I ND	-
Diethyl phthalate	1 52	1 52	1 52	1 52	ŀ
4-ChlorophenyI phenyl ether	I ND	I ND	I ND	I ND	1
Fluorene	ם א	I ND	I KD	OK 1	!
N-Nitrosodiphenylamine	I ND	I ND	I ND	I KD	!
4-Bromophenyl phenyl ether	I ND	סא ו	I ND	I ND	!
Hexachlorobenzene	ם א	1 ND	I KD	i KD	!
Phenanthrene	i ND	לא ו מא נ	I KD	1 ND	!
Anthracene	I ND	• ••	I ND	I ND	1
Di-n-butyl phthalate	ם א	i ND	I ND	I ND	!
Fluoranthene	I ND	I ND	I KD	t ND	ı
Pyrene	I ND	I ND	I ND	I ND	1
Butyl benzyl phthalate	I NO	I NO	I KD	I ND	1
3,3'-Dichlorobenzidine	I KD	I ND	1 ND	I ND	١
Benzo(a)anthracene	I ND	I ND	I ND	I ND	1
bis(2-Ethylhexyl)phthalate	1 KD	I ND	I ND	I KD	i
Chrysene	1 ND	I ND	I ND	ם א	ı
Di-n-octyl phthalate	I ND	I ND	i nd	I ND	ı
Benzo(b)fluoranthene	1 ND	םא ו	I ND	I ND	ı
Benzo(k)fluoranthene	I ND	I ND	I ND	I ND	ı
Benzo(a)pyrene	I ND	ם א ס	1 ND	I ND	ı
Indeno(1,2,3-c,d)pyrene	םא ו	I ND	I ND	I · ND	1
Dibenzo(a,h)anthracene	I KD	I ND	I ND	I ND	1
Benzo(g,h,i)perylene	I ND	I ND	I ND	I ND	1
• • • •	1	1	1	1	ı
TOTAL TARGETED BASE NEUTRALS ***	1 52	1 52	1 52	1 52	i
	1	1	1	1	ı
NON-TARGETED BASE NEUTRALS	1	t	1	ı	ı
C9H2O isomer	1 260	1 260	1 260	i 260	i
	I	1	Ī	1	i
TOTAL NON-TARGETED BASE NEUTRALS	1 260	1 260	1 260	1 260	ı

NOTES: J - Detected below reporting limit or is an estimated concentration.

FOOTNOTE: Hand auger samples HA-20 through HA-25 were not sampled for base neutral compounds, thus they do not appear on this table.

ND - Not detected.

^{• -} Sample analyzed on indicated date, method blank analyzed on 5/15/89.

^{*** -} Includes compounds at estimated concentrations (J).

SUMMARY OF BASE NEUTRAL SOIL METHOD BLANK RESULTS - TEST PITS BY EPA METHOD 8270 LE CARPENTER, WHARTON, NEW JERSEY GeoEngineering, Inc. November, 1989 Page 10 of 10 Revised 12/20/89

UM 102 10.		I TP-74 I 5/24/89 #				I TP-79 I 5/19/89
						========
PARAMETER	l	I	1	1	1	1
(ug/kg)	=	1	1	l	1	I
	•	•	1	!	1	l
			I ND	I ND	ל אD מא ו	I ND
1,3-Dichlorobenzene 1,4-Dichlorobenzene			I ND	I ND		I ND I ND
			i ND	I ND	i ND	I ND
1/4 510112010001120114			I ND	I ND	I KD	ם או
			I ND	I ND	I ND	I ND
* **			I ND	i ND	I ND	1 ND
			l ND	I ND	I ND	l ND
			I ND	i ND	I ND	I ND
•			I ND	I ND	1 KD	I ND
•			I ND	I ND	i ND	i ND
Naphthalene			I ND	i ND	I ND	I ND
Hexachlorobutadiene		םא ו	I KD	1 ND	! ND	I ND
		I ND	I KD	I ND	I ND	I ND
			I ND	טא ו מא ו	I ND	i ND
z duzdroughtudzene		1 98 J	I ND	I KD	I ND	I ND
Dimethyl phthalate		i ND	I ND	I ND	I ND	I ND
nocuapacity zene		1 ND	I ND	i ND	I ND	i ND
nochephonono		I ND	I ND	I ND	i ND	I ND
2,4-Dinitrotoluene		I ND	טא ו			פא ו מא ו
2,6-Dinitrotoluene	I ND	עא ו מא ו	טא ו ND	I ND DK I	I ND	טא ו מא ו
Diethyl phthalate	l KD	טא ו מא ו	UN I	מא ו	י אט פאר ו	ם או
4-Chlorophenyl phenyl ether	I ND	עא ו מא ו	I ND	I KD	I ND	I KD
Fluorene N-Nitrosodiphenylamine	I ND	I ND	I ND	I ND	I KD	לא ו DI
4-Bromophenyl phenyl ether	I ND	םא ו	עה ו מאו	ו אס	i KD	לוא ו
Hexachlorobenzene	I ND	םא ו	I ND	I ND	מא ו	לא ו
Phenanthrene ·	I ND	I ND	I ND	I ND	מא ו	מא ו
Anthracene	I ND	I ND	I ND	I ND	I ND	l ND
Di-n-butyl phthalate	I ND	מא	1 89 J	i ND	i ND	I ND
Fluoranthene	מא ו	I ND	מא ו	I ND	I ND	I ND
Pyrene	i ND	I ND	I ND	i ND	I ND	i ND
Butyl benzyl phthalate	ם או	t ND	I ND	i ND	i ND	i ND
3,3'-Dichlorobenzidine	I ND	i ND	I ND	I ND	I ND	עא ו ND
Benzo(a)anthracene	I ND	i ND	I ND	I ND	טא ו	I ND
bis(2-Ethylhexyl)phthalate	I ND	! KD	1 130 J	1 900	1 900	1 900
	מא ו	עא ו D I	1 ND	I ND	i ND	I ND
Chrysene Di-n-octyl phthalate	I KD	i ND	I ND	מא ו	טא ו	עא ו D I
Benzo(b)fluoranthene	I ND	נא ו מא	I ND	i ND	i ND	I ND
Benzo(k)fluoranthene	I ND	i KD	מא ו	מא ו	I MD	I ND
Benzo(a)pyrene	1 ND	טה ו	נוח ו	1 10	1 ND	, ,,,,
Indeno(1,2,3-c,d)pyrene	1 ND	ם א	I ND	I ND	1 KD	! ND
Dibenzo(a,h)anthracene	I ND	I ND	I ND	I ND	I ND	I ND
Benzo(g,h,i)perylene	I ND	i ND	I ND	i ND	I ND	ם או
MARL REDARMED SEER WESTERLES	1	1	1	1	1	1
TOTAL TARGETED BASE NEUTRALS ***	1 ND	1 98	1 219	1 900	1 900	1 900
		1	l			1
NAN-TIDATTED DICT NEUTRALE	i	1	1	Į.	I .	I
NON-TARGETED BASE NEUTRALS	1 210	1 25	1	1 110		1 "
2,6-bis(1,1-Dimethylethyl)-4-methylphenol	1 80	I NO	1 150	I ND	ן אם	סא ו
4-Hydroxy-4-methyl-2-pentanone	i 23000 n	1 ND	מא ו	I ND	I ND	I ND
Total Unknown compounds	2260	1 ND	330	1 3600	1 3600	1 3600
PATET MAN MEDAPARA DESA MANAGERA		1		1		1
TOTAL NON-TARGETED BASE NEUTRALS ***	1 25260	I ND	i 480	1 3600	I 3600	1 3600

NOTES: J - Detected below reporting limit or is an estimated concentration.

ND - Not detected.

n - Occurance of compound possibly due to laboratory contamination (aldol condensation product).

^{# -} Sample analyzed on indicated date, method blank analyzed on 6/1/89.

^{• -} Sample analyzed on indicated date, method blank analyzed on 5/19/89.

^{** -} Sample analyzed on indicated date, method blank analyzed on 5/26/89.

TABLE 13: SUMMARY OF BASE HEUTRAL ANALYTICAL TESTING - HAND AUGER RESULTS BY EPA METHOD 8270-15
L.E. CARPENTER, WHARTON, NEW JERSEY.

GeoEngineering, Inc. November 1989 Revised 12/20/89

					FIELD **	
SAMPLE ID:	HA-16	HA-17	HA-18 I	HA-19 I	BLANK	ļ
	3/28/89	3/28/89	3/28/89 1	3/28/89 1	3/28/89	Ī
	0 - 0.5	i 0 - 0.5 i	0 - 0.5			
************************************	*********		=======================================		**********	
PARAMETER	-	!				
(ug/kg)		!				! !
	-	t ID I				
bis(2-Chloroethyl)ether			י עמ ו			ì
1/0 Dicktotoprincing			I ND I			, I
.,			I ND			1
bis(2-Chloroisopropyl)ether		i ND			i ND	1
	I ND	סא ו	1 ND	I ND	I ND	ı
						1
	I ND					!
raopaerone	l ND				לא ו מא ו	1
DAD ID GHEGE COMMING TO SHARE	I ND I ND				מא ו	i
2/4/. 12202012200	I ND				t ND	i
berrerene	I ND	i ND			1 ND	i
	1 RD	1 ND				i
	I ND	I ND	I ND	I ND	J ND	i
Dinethyl phthalate	I ND	CON 1	I ND	I ND	l ND	ŀ
Acenaphthylene	I ND	! 810	I ND	1 80	מא ו	Į
Acenaphthene	I ND	I ND	I RD	I ND	I ND	1
2,4-Dinitrotoluene	I ND	I ND		• • • • • • • • • • • • • • • • • • • •	I ND	ı
2,6-Dinitrotoluene	I ND	I ND		I ND	I ND	1
Diethyl phthalate	1 56 Jp	1 53 Jp	I ND	1 1900 JB	I ND	1
4-Chlorophenyl phenyl ether	I ND	I KD Cra i	I ND I ND	ם אם ו מא ו	I ND	i i
Fluorene N-Nitrosodiphenylamine	t ND	מאו	I ND	1 10	i ND	i
4-Bromophenyl phenyl ether	I ND	I ND	1 ND	1 ND	i ND	i
Hexachlorobenzene	I ND	1 RD	1 KD	i ND	I ND	1
Phenanthrene	מא ו	I ND	I ND	I RD	I ND	ı
Anthracene	l HD	1 ND	I RD	I ND	I KD	1
Di-n-butyl phthalate	I ND	I NO	1 100	מא ו	i ND	1
Fluoranthene	I ND	I ND	I ND	I ND	I ND	1
Pyrene	1 ND 1 37 J	I ND I 360 J	I KD	I ND I 68000	i ND I ND	1
Butyl benzyl phthalate 3,3'-Dichlorobenzidine	1 37 J 1 ND	1 300 J	I ID	I NO	I KD	i
Benzo(a)anthracene	I RD	I ND	I AD	I ND	I ND	i
bis(2-Ethylhexyl)phthalate	1 5800	1 1700	1 1100	1 49000	I ND	i
Chrysene	i ND	I ND	i KD	I ND	1 100	i
Di-m-octyl phthalate	I ND	I ND	1 ND	I ND	I ND	1
Benzo(b)fluoranthene	I ND	I ND	I ND	I ND	I NO	1
Benzo(k)fluoranthene	I ND	t ND	I ND	CN 1	I ND	1
Benzo(a)pyrene	1 KD	I ND	I ND	I ND	i ND	1
Indeno(1,2,3-c,d)pyrene	I ND	1 ND	1 ND	i ND	1 ND	1
Dibenzo(a,h)anthracene	I ND	1 ND	I ND	i KD	I ND	1
Benzo(g,h,i)perylene	I ND	1 ND	D ZZ	I ND	I ND	1
	1		!		1	1
TOTAL TARGETED BASE NEUTRALS ***	5837	1 2060	1 1100	1 129900	I ND	1
	1	!	1	1	:	1
NON-TARGETED BASE NEUTRALS	1	1	1	<u> </u>	i	i
Total Sulfur	1 ND	Ck	, ND	I ND	I ND	i
Total Phthalates	I ND	i ND	I ND	1 5400	I ND	i
Total Benzene compounds	ם או	i RD	I ND	I ND	i ND	i
Total Alkane compounds	i ND	990	1 460	1 11400	i ND	i
Total Alkene compounds	1 210	1 2550	1 260	1 11000	I ND	i
Total Anthracene compounds	I ND	I ND	1 ND	1 RD	I ND	1
Total Naphthalene compounds	I ND	I ND	i ND	1 ND	I ND	1
Total Alcohol compounds	I ND	I KD	1 1500	33000	I ND	-1
Total Hexandecanoic acid	I ND	1 660	I ND	I ND	I ND	1
Total Phosphoric acid	I ND	סא ו	I ND	1 67000	i ND	-1
Total Propanoic acid	I ND	I KD	I ND	11000	ND	-
Total Aldehyde compounds	i ND	1 1610	1 950	I 18500	I ND	!
Total Unknown compounds	1 320	1 2250	1 3350	1 139900	I ND	- 1
Total Other compounds	I ND	I ND	i RD	1 47000	! ND	1
TOTAL MAN. TARCETTO DACE HONORALE	1 I 530	I 8060	l 1 6520	1 1 344200	I ND	1
TOTAL NON-TARGETED BASE NEUTRALS	1 330	, 0000	, 0320	. 311200	1 1111	'

NOTES:

- J Detected below reporting limit or is an estimated concentration.
- p Compound also detected in laboratory method blank.
 B Compound also detected in laboratory method blank, and sample concentration is at least
- 5 times greater than laboratory method blank concentration. ND Not detected.

- Analyzed by EPA Method 625 and reported in ug/l.
 Excludes compounds detected in laboratory method blank (p); includes compounds detected at trace concentrations (J) and (B).

Enseco-Erco Report Revisions

HA-16, 17 and 19 Dated November 28, 1989

METHOD BLANK SUMMARY

				COMC.	m31.10	CAS NUMBER	COMPOUND (HSL.TIC OR UNHHOWN)	CONC.	UMITS	-CMOC
FRE ID	ANAL VSIS	FRACTION				1	Methyleae chloride	1.7	ugleg	25
	4-11-89		Soil Cail	10w	12	75.19.2	methy leve Chloriole	6.8	1771 - Y	25
APR 89-12B	4-11-89	VOA	Soil	100	7	70-01-2	1,1,2- Trichloro - 2,2,1-tri-	28	uglkg	NA
	 	 - - 		1,	-1		Ll uoro metuare		0_0	
10016 1111	4-10-89	100	Soi/	low	VY	75-19-2	methylene chloride	5.3	liglkg	1
APR 89-14A	4-10-19	104	AQUEOUS			75-09-2	methylene Chloride	5.9	19/2	25
APR 89-VIB	_		HULLEOUS	1000	V3	75-19-2	me they lead chloride	3.3	ug 12	
1 APR 89-V3A 0 MAR 89-F13		MIA	HOUFOUS	1000	53	117-81-7	bis (2-ETM/ hery) phrhains	3.1	ugle	10 NA
) MAK 81-113	17			1	V	<u> </u>	(9 H20 BOMLY	260	la/ka	
APR 89-513	5-15-89	BUA	Soil	low	53		Ca Hzu isomer	52	7 7	T
1	1	1	4	1		84-669	Diethyl Phthalate	100	Jug/kg	
			ļ	-		_				
		<u> </u>	<u> </u>							
			 	 						
			<u> </u>	╂		-				
		 	 	-						
·				 	ļ					
			 		 	_			_	
	_		 		 	_				

METHOD BLANK REPORT Semivolatile Organics by GC/MS

Analyte	Result	Units	Reporting Limit
Test: 8270-PP-BN Matrix: SOIL QC Lot: 10 APR 89-SA QC Run:		us the	220
bis(2-Chloroethyl)ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene bis(2-Chloroisopropyl)ether N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone bis(2-Chloroethoxy)methane 1,2,4-Trichlorobenzene Naphthalene Hexachlorocyclopentadiene 2-Chloronaphthalene Dimethyl phthalate Acenaphthylene Acenaphthene 2,4-Dinitrotoluene Diethyl phthalate 4-Chlorophenyl phenyl ether Fluorene N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Hexachlorobenzene Phenanthrene Anthracene Di-n-butyl phthalate Fluoranthene Pyrene Butyl benzyl phthalate Fluoranthene Pyrene Butyl benzyl phthalate 5,3'-Dichlorobenzidine Benzo(a)anthracene bis(2-Ethylhexyl)phthalate Chrysene Di-n-octyl phthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-c,d)pyrene Dibenz(a,h)anthracene Benzo(g,h,i)perylene		ugykkagggggggggggggggggggggggggggggggggg	330 330 330 330 330 330 330 330 330 330

J = Result is detected below the reporting limit or is an estimated concentration.

Enseco-Erco Report Revisions

TP-73
Dated December 6, 1989

REVISED DATA SHEET 12/06/89

QC LOT ASSIGNMENT REPORT Semivolatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
003232-0001-SA 003232-0001-SA 003232-0002-SA 003232-0003-SA 003232-0003-SA 003232-0005-SA 003232-0005-SA 003232-0006-SA 003232-0006-SA 003232-0007-SA 003232-0007-SA 003232-0008-SA 003232-0008-SA 003232-0009-SA 003232-0009-SA 003232-0010-SA 003232-0011-SA 003232-0011-SA 003232-0011-SA	SOIL SOIL SOIL SOIL SOIL SOIL SOIL SOIL	8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S 8270-S	19 APR 89-SA 19 APR 89-SA 11 MAY 89-NA	20 APR 89-S13 20 APR 89-S13 26 MAY 89-N11 26 MAY 89-N11 26 MAY 89-N11 15 MAY 89-N13 15 MAY 89-N14
003232-0013-SA	AQUEOUS	625-A	12 MLV 03-1W	13 MIN 03-114